

IN THE DRAWINGS

Please amend the drawings. Copies of figures with amendments in red ink are enclosed herewith.

REMARKS

The specification, claims, and drawings have been amended to comply add Sequence identification numbers in order to comply with sequence listing requirements.

It is respectfully submitted that no new matter has been introduced by the present amendments and entry of the same is respectfully requested.

CONCLUSION

Applicants believe all pending claims are now in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 731-5875.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account 01-0431.

If the Examiner has any questions pertaining to this application, the Examiner is requested to contact the undersigned attorney.

Respectfully submitted,



Thomas Malone
Reg. No.: 40,078

Date: 1/24/03

**VERSION WITH MARKINGS TO SHOW CHANGES
MADE TO THE APPLICATION**

In the Specification

Please amend the third paragraph on page 3 of specification as follows.

In one embodiment, the present invention provides an isolated growth factor polynucleotide comprising a nucleic acid sequence depicted in Figure 1B (SEQ ID NO: 02). In one aspect of this embodiment, the isolated polynucleotide comprising a nucleic acid sequence selected from the group consisting of: (a) a nucleic acid sequence of at least 90 nucleotides that is essentially identical to a linear sequence of comparable length contained in the sequence shown in Figure 1B (SEQ ID NO:02); (b) a nucleic acid sequence of at least 90 nucleotides encoding a polypeptide that is essentially identical to a linear sequence of at least 30 amino acids contained in the sequence shown in Figure 1A (SEQ ID NO:01); and (c) a complement of (a) or (b). In another aspect, the isolated polynucleotide encodes a polypeptide comprising an amino acid sequence that is essentially identical to a linear sequence of comparable length shown in Figure 1A (SEQ ID NO:01). In yet another aspect, the isolated polynucleotide encodes a polypeptide comprising an amino acid sequence essentially identical to the entire amino acid sequence shown in Figure 1A (SEQ ID NO:01). In still another aspect, the isolated polynucleotide encodes a polypeptide comprising the amino acid sequence shown in Figure 1A (SEQ ID NO:01). The polynucleotide of the present invention can code for the whole or domain(s) of the growth factor, or a mutant, fusion or a functionally equivalent growth factor polypeptide. In a related aspect of this embodiment, the invention encompasses a method of diagnosing a pathogenic condition or susceptibility to a pathogenic condition that is associated with a genetic alteration in a growth factor polypeptide encoded by the claimed polynucleotide. The method comprises the steps of: (a) providing a biological sample of a subject containing nucleic acid molecules and/or polypeptides; (b) determining a genetic alteration associated with the growth factor; and (c) correlating the alteration with a pathogenic condition or susceptibility to a pathogenic condition.

Please amend the first paragraph on page 4 of the specification as follows.

In another embodiment, the present invention includes a polynucleotide sequence that is useful as a probe for diagnostic or research purposes. Preferably, the probe is between 5 and 100 nucleotides in length and may comprise any of the contiguous nucleotides shown in Fig. 1A (SEQ ID NO:01). Longer sequences may be used as probes depending on the type of assay used.

Please amend page 6, line 21 of the specification as follows.

Figure 1A (SEQ ID NO:01) depicts the amino acid sequence for the peptide encoded by polynucleotide A.ctg12831-000000.10.0.

Please amend page 6, line 23 of the specification as follows.

Figure 1B (SEQ ID NO:02) depicts the polynucleotide sequence of A.ctg12831-000000.10.0.

Please amend the first paragraph on page 19 of the specification as follows.

In a separate embodiment, the present invention provides an isolated polynucleotide comprising a nucleic acid sequence having at least about 90 nucleotides that is essentially identical to a linear sequence of comparable length contained in the sequence shown in 1B (SEQ ID NO:02). Preferably, the isolated polynucleotide contains at least about 90 nucleotide bases, more preferably at least about 150 nucleotides, more preferably at least about 450 nucleotides, and even more preferably at least about 1200 nucleotides. When the polynucleotide sequence is used as a probe, then it can also be shorter in length. For example, the sequence can be any contiguous nucleotides along the sequence shown in Fig. 1B (SEQ ID NO:02), its complement, or a variation of a few nucleotides. The length can be from 5, 13, 15, or 20 nucleotides to 25, 30, 50, 75, 100 or more nucleotides in length. In some embodiments very long sequences can be physically attached to a substrate that may be 500 to 5,000, or even 50,000 nucleotides long.

Please amend the second paragraph on page 19 of the specification as follows.

In another embodiment, the isolated polynucleotide comprises a nucleic acid sequence of at least 90 nucleotides that encodes a polypeptide essentially identical to a linear sequence of at least 30 amino acids depicted in Figure 1A (SEQ ID NO:01). Preferred linear peptide sequence is at least about 50 amino acids in length, more preferably at least 150 amino acids in length, and more preferably at least 350 amino acids. In yet another embodiment, the isolated polynucleotide may be any polynucleotide which encodes the polypeptide of Figure 1A (SEQ ID NO:01). In yet another embodiment, the isolated polynucleotide is a complement of any of the above mentioned growth factor polynucleotides.

Please amend the third paragraph on page 19 of the specification as follows.

These gene sequences can be identified, in whole or in part, by specifically hybridizing under moderate or stringent conditions to the exemplary polynucleotides shown in Figure 1B (SEQ ID NO:02). Alternatively, the invention sequences can be identified by their homology to published or known open reading frames, or pieces of genomic sequences using computer-assisted methods known in the art or those described herein.

Please amend the first paragraph on page 22 of the specification as follows.

Polynucleotides that correspond or align more closely to the exemplary sequences disclosed herein are comparably more preferred. A query polynucleotide of at least 90 nucleotides is considered to be essentially identical to a reference polynucleotide (e.g. sequences shown in 1B. (SEQ ID NO:02)), when the query polynucleotide exhibits at least about 80% sequence identity, more preferably at least about 90% identity, even more preferably at least about 95% identity using any of the above-mentioned alignment programs with the default settings. Likewise, a query polypeptide is essentially identical to a reference polypeptide of at least 30 amino acids, when the query polypeptide shares

at least 80% sequence identity, more preferably at least about 90% identity, even more preferably at least about 95% identity that can be discerned by the aforementioned programs using their respective default settings. When using Bestfit or any other sequence alignment program to determine whether a particular sequence is, for example, 80% identical to a reference sequence of the present invention, the percentage of identity is preferably calculated over a linear sequence of comparable length that is contained in the reference sequence. Typically, the upper limit of gaps in homology is set at 20% of the total number of amino acid residues or nucleotide residues in the respective reference sequence. The altered residues may occur at the amino or carboxyl terminal positions of the reference sequence or anywhere between those terminal positions, interspersed either individually among residues in the reference sequence or in one or more contiguous groups within the reference sequence. Allowable sequence alterations include but are not limited to deletion, insertion, translocation and substitution of individual residues.

In the Claims

Please amend Claims 1, 2, 6, 7, 8 as follows:

1. An isolated polynucleotide comprising a nucleic acid sequence shown in Figure 1B (SEQ ID NO:02).
2. An isolated polynucleotide comprising a nucleic acid sequence selected from the group consisting of:
 - a) a nucleic acid sequence of at least 90 nucleotides that is essentially identical to a linear nucleotide sequence of comparable length depicted in Figure 1B (SEQ ID NO:02);
 - b) a nucleic acid sequence of at least 90 nucleotides encoding a polypeptide that is essentially identical to a linear peptide sequence of at least 30 amino acids depicted in Figure 1A (SEQ ID NO:01); and
 - c) a complement of (a) or (b)

6. The isolated polynucleotide of claim 2 wherein said nucleic acid encodes a polypeptide comprising an amino acid sequence that is essentially identical to a linear sequence of comparable length shown in Figure 1A (SEQ ID NO:01).

7. The isolated polynucleotide of claim 2 wherein said nucleic acid sequence encodes a polypeptide comprising the amino acid sequence shown in Figure 1A (SEQ ID NO:01)

8. The isolated polynucleotide of claim 2 wherein said nucleic acid encodes a polypeptide comprising an amino acid sequence essentially identical to the entire amino acid sequence shown in Figure 1A (SEQ ID NO:01).

Figure 1

Sequence Name:

A.ctg12831-000000.10.0

Figure 1A: SEQ ID NO: 01

MGKDFMSKTPKAMATKAKIDKWDLIKLSFCTAKETTIRVNRQLTEWEKIFATYSFDKGL
ISRIYNELKQIYKKKTKNPIKKWVKDMNRHFSKEGIYAAKKHMKKYSSSLAIREMQIKTT
MRYHLTPVRMAIIKKSNNRDMDEAGNHHSQQTITRTKNQTPHVLTHRWILQQSHWVTVL
SDISELMHKTDRIVNLMLCMYLLTVDLDRNLDDAKRYSCTPRNYSVNIREELKLANVVF
PRCLLVQRCGGNCGCGTVNWRSCNCGKTVKKYHEVLQFEPGHIKRRGRAKTMALVDIQ
LDHHERCDCICSSRPPR

Figure 1B: SEQ ID NO: 02

GATATGTAAGAAAGCCTCATCTTTTGATTTTAAATATACAAGATGCTTTCTTTAAGAGA
GCAAGATTCAAAATTGTTTTGTGTTTCAAAATTTAAAAATAAATTTATCTCCTAAATTTT
CTAAAGACATGTTTCATATATTTGACCATCCCTTATTTTGGCAAAGGATTTTAAGAGTCT
AACTCAAACATATGTAAGCTCTGGTGTACCTGGTTATATATACCAAAAAAACATTTGAT
CTATATACACATAGACATGAATATATTTCTGTGTGTGTTTGTGCATATATAACCTCAAAC
ACTATTATTAAATGCAATCCTATATTCTTAGGTATAGAAGTTGATGATATACCTTTCTAC
TTGCCATGGCATTAAACAAAGCAAGGCTGAGACTCAGCAACCACTTGTGTTTCATTGCATTG
CAGGCTAGTAGTAAGTTTGGTTGCTGGTAGGAAAAGGGTCTCTTATCTCACCCCTCCTTAA
ACTAAAGGTTCTTTTCAAGGCTTAATGTAAGGATGTGCACATTCTCTTATCGAGGTGGTCTT
GAGCTGCAGATACAATCACATCGTTCATGGTGATCCAACCTGGATGTCAACTAGAGCCATG
GTCTTAGCTCTACCCCTCCTCTTGATGTGGCCAGGCTCAAACCTGTAATACCTAGGACAAG
AAGCACATCTCCTGTTAGAAAGCCTTTGGAGTTCAACTCAGTCAGATGCCACCTACTTAT
TACCTTTTTGACAACTAGTTCTTAGCCCTTTTGAGAACCCAACAGAAGCTATGGGCTTGCT
ATTAGAATGCACACGTTGCTATTAGAATGTACACATTTTTCAAATAATTGACTCCCTGAA
GTGGAGGAATCAATTGATCCCAGAGTAATGCCCAGCATAACTTACCTGAAGTACCCAGAT
GATTTTCATGTGTCTTAGCAGGTATTTATTAATAGCTTTCTAAGGGCTGCTTTGGGCCAA
GTACTGTTCCAAATATTATCGTAAAGATCCTTCTGACCAAGGCATGTGTTATAGATGAAT
ACAATACTTGAGCATATTATTAGCATGGAGAGGAAAATGAATACAACCATGAATAAAATA
TGCTGGTATATCTAAATCTTTGGTTGAAGTAAACATGTTGCCCTGGAGTTGCTGGCAAG
ATGGCCGAACAGGAACAGCTCTGGTCTGCAGTTCCAGCGAGATCAATGCAGAAGGCGGG
TGATTTCTCCATTCCCAACTGAGGTACCCAGTTCATCTCACTGGGACTGGTTAGACATTG
GGTGCAGCCACGGAAGGTGAGCTGAAGCAGGGTGGGGTGTCCCTCAGCCGCGAAGTGC
AAGGGGGTGGGGGATCTCCTTCCCCCAGCCAAGGGAAGCCATGAGAGACTGTACCAGGAG
GAATGGTGCACCTCTAGTCCAGATACTGCACTTTTCCTCATAGTCTTTGCAACTGGCAGACC
AGGAGATTTCCCCCAGTGCCATATGCCACCAGGGCCCTGGGTTTCAAGCACAAAACCTGGGC
GGCCATTTGGACAGACACCGAGCTAGCCGAGCAGTTTATTTTTTCATACCCAGTGGCGC
CTGGAATGCCAGCAAGACAGAACCATTCACTCCAGGGATCCAAGTGGTCTGGCTCAGTGG
GTCCACCCCCATGGAGCCAGCTAGCTAAGATCCACTGGCTTGAAATTCTCCTGCCAGC
ACAGCAGTCTGAGATTGACCTGGGATGCTTGAGCTTGGTGAGGGGAGGGGCGTCTGCCAT
TGCTGAGGCTTGAGTAGGCGAGGCGGTTTTACCCCTCAAAGTGTAACAAAGCTACTGGGA
AGTTTGAATGGGGCGCCACCGCAGCTCAGCAAGGCCGCTGTGGCAAACCTGCCCTCTCTAG
ATTCCCTCCTTTTTGGGCAGGTCATCTCTGAAAGAAAGGCAGCAGCCCCAGTCAGGGACTT
ATAGATAAAACCCCATCTCCTTGGGACAGAGAACCCTGGGGGAAGGGGTGGCTGTGGGTG
CAGCTTCTCAGACTTAAACATTCCTGCCCTGGAGGCTCTGAAGAGAGCAGCGGATCTCCCA
GCACAGCATTTGAGCTCTGATAAGGGACAGGCTGCCCTCCTCAAGTGGGTCCCTGACCCCC
ATGTATCCTGACTGGGAGACATCTCCCATTAGGGGCCAATAGACATTTTATACAGGAGAC
AGGGTCTGGAGTGGACCTCCAGCAAACCTCCAGCAGACCTGCAGCAGAGCGGCCTGACTGT
TAGAAGGAAAAGTAACAAACAGAAAGGAATAGTATCAACATTAACAAAAAGGACATCCAC
TCAGAGACCCCATCTGAAGGTCAACAACATCAAAGACCAAAGGTAAATAAAACCAAAAAG

ATGGGAAAAACCAGTGCAGAAACACTGAAAAATTCAAAAACCAGAACTCCTCTTCTCAAC
CAAAGGATCACAACTCCTCGCCAGCAAGGGAACAAAACCAGATGGAGAATGAGTTTGAGG
AATTGACAGAAGTAGGCTTCAGAAGGTGGGTAATAACAACTCCTCCGAGCTAAAGGAGC
ATGTTCTAACCAATGCAAGGAAGCTAAGAACC'TTGAAAAAGGT'TAGATGAATTGCTAA
CTAGAATAATCAGTGTAGAGAAGAACATAAATGACCTGATGGAGCTGAAAAACGCAAGAC
AAGAACTTCATGAAGCATACACAAGCTTCAATAGCCAAATCGATCAAGCAGAAGAAAGGA
TATCAGTGATTGAAGATCAAATTAATAAAAGAAAGTGAGAAGACAAGATTACAGAAAAAA
GAGTGAAAAAGAAACAAACAAAGCCTCCAAGAATTATGGGACTATGTGAAAAGACCAAATC
TACATTTGATTGGTGTCCCCCAAAGTGATGGGGAGAATGGAATCAAGTTGGAAAAACACTC
TTCAGGGTATTATCCAGGAGAAATTTCCCATCTATCAGGGCAGGCCAACATTCAAATTC
GGAAATATGGAGAACACCATAAAGATACTCCTCGAGAAGAACAATCCCAAGACACATAAT
CTTCAGATTCACCAAGGTTGAAATGAAGGAAAAAATGTTAAGGGCAGCCAGAGAGAAAGG
TTGGGTTACCCACAAAAGGGAAGCCAAATCAGACTAACAGCGGATCTCCCGGCAGAAACCT
ACAAGCCAGAAGAGAGTGAGGGCCAATATTCACATTC'TTAAAGAAAATAATTTTCAACC
CAGAATTTTCATATCCAGCCAAACCAAGCTTCC'TAAGTGAAGGAGAAATAAAATCCTCTAC
AGAGAAGCAAATGCTGACAGATTTTGTACCACCAGGCTGCC'TTACAAGAGCTCCTGA
AGGAAGCACCAACATGGAAAGGAACAACTGGTACCAGCCACTGCAAAAACATCCCAAATT
GTAAAGACCAATTGATGCTATGAAGAAAGTGCATCAACTAACGGGCAAAATAACCAGCTAG
TGTCATAATGGCAGGATCAAATTCACACATAATAATATTAACCTTAAATGTAAATGGGCT
AAATTTCCCAATTAAGACACAGACTGGCAAATTTGGATAAAGAGTCAAGACCCATCAGT
GTGCTGTATTTCAGGAGGCCCATCTCACATGAAAAGACACACATAGGCTCAAAATAAAGGG
ATGGAGGAAGATTTACCAAGTAAATGGAAAAACAAAAAAGCAGGGGT'TGCAATCCT
AGTCTCTGATAAAACAGACTTTAAACCAACAAAGATCAAAAGAGACAAAGAAGGCCATTA
CATAATGGTAAAGGCATCAATGGAACAAGAAGAGCTAACTATCCTAAATATACATGCACC
CAATACAGGAGCACCCAGATTCATAAAGCAAGTTCTTAGAGACCTACAAAAGAGACTTTGA
CTCCACACAAATAAGTGGGAGTCTAAATAATAAATAGACACTTTAACACCCCACTGCC
AATATTAGGCAGATCAATGAGACAGAAATTAACAAGGATATCCAGGAGTTGAAC'TGAGC
TCTGGACCAAGCGGACCTAATAGATATCTACAGAACTCCCCACCCCAAATCAACAGAATA
TACACTCTTCTCAGCATCACATTACACCTATTTTAAAAATTGACCATGTAATTTTAAGTAA
AACACTCCTCAGCAAAATGCAAAAAGACAGAAATCCTAACAAACAGTCTCTCAGACTACAG
TGCAATCTATTTAGAACTCAGAATTAAGAACTCACTCAAAATCACACAAC'TACATGGAA
ACTGAACAACCTGCTCCTGAATGACTACTGGGTAAATAACAAAATGAAGGCAAAAATAAA
GATGTTCTTTGAAACCAATGAGAACAAGACACAATGTACCAGAATCTCTGGGGCATATT
TAAAGCAGTGTGTAGAGGGAATTTATAGCACTAGATGCC'TACAAGAGAAAGCAGGAAAT
ATCTAAAATAGACACCTTAACATCACAAATTAAGAAGAACTAGAGAAGAAAGAGCAAACAA
TTCAAAAGCTAGCAGAAGACAAGAAATAACTAAGATCAGAGCAGAACTGAAGGAGATAGA
GACACAAAAAGCCCTTCAAAATAAATCAATGAATCCAGGAGCTGGTTTTTTTGAAGATCA
GCAAAATAGACCACTAGACAGACTAATAAAGAAAGAAAAGAGAGAAGAAATCAAAGAGATGC
AATAAAAAATGATAAAGGGGATATCACCACCGATCCCAAGAAAATACAACTAT'TATCAG
AGAATATTATAAACACCTCTATGCAAAATAAATAGAAAATCTAGAAGAAATGGATAAAT
CCTGGACACATATGTAGCCTGTATGGACCTTGGGGGACAGAACAAAAGGGGTGAATGCA
GAAATAAAAGACAAAGACAAAAGAGTATGTTTGGAAAGTAGGGGTCAGGGGGCAACTTGCC
TCTAATGGACAAGGGCCCTGAGCTTTACACCACCTCTGTATTTATTAGGCAAAAGAGAT
AGCGAGAGGGTGAGTTGGAAGAAGAGGTCAGCTGTTAGGTCCAGAGTAGGCC'TGCAAGAC
TGCATTTCTCAAACAATAGGCTCTAGATGTCCAGTAGATAACCTCAAGGAGCCAGTGCC
AGGGAGTGATGGCCCTCAGCAAAACCTTCTAGGGCAGGCACAGAAGTAAGTTTGGCCACAT
TCTGTATTTCACGATAAACAGTTTGCTGTTTGTATCAAGTAGCCTCCAGTGGAATGCTGAGT
TGGTCATGATCCCTTTGGCCTTTTTGGCTCCCAAAACACATACACCTCTCAAGACTAAA
CCAGGAAGAAGTCAAATCCCTGAATATACCAGTAACAAGTTCTAAAATTTGAAGCAGTAAT
TGATAGCCTACCAACCAAAAAAAGTCCAGGACCAGACGGATTACAGCCAAATTTCTACCA
GAGGTACAAAAGAGAAGCTGGTACTATTCCTTCTGAACTATTCCAAAAAATAGAAAATGG
GAATCCTCCCTAACTCATTTTACGAGGCCAGCATCATCCTGATACCAAAACCTAGCAGTG
ACACAACAAAAAGAGGAAATTTACAGGCCATATCCCTGATGAACATTGATGTGAAAATCC
TCAATAAAATACTGGCAAACCAATCCAGCAGCACATCAAAAAGCTTATCTACCATGATC
AAGTTGGCGTCATCCCTGGGATGCAAGGCTGGTTCAAAATATGCAAAATCAATAAATGTAG
GCCATCACATAAACAGAACCAATGACAAAAACCATGATTATCTCAATAGATGCAGAAA
AGGCCTTTGTCAAAATTCACAGCCCTTCATGCTAAAAATTTCTCAGTAACTAGGTATCG

ATGGAATGTATCTCAAAATAATAAGAGCTATTTATACAAACCCACAGCCAATATCATACT
GAATGGGCAAAACTGGAAGCATTCCCTTTGAGAAGTGGCACAAAGACAAGGATGCCCTCT
CTCACCACCTCTATTCAAGATACTATTGGAAGTTCTGGCCAGGGCAATCAGGCAATAGAA
AGAAATAAAGGGTATTCAAATAGAAAGAGAGGAAGTCATATTGTCTCTGTTTGAGATGA
CATGTTTGTATATTTAGAAAACCCCATCGTCTCAGGCCAAAACTCCTTAAGCTGATAAG
CAACTTCAGCAAAGTCTCAGGACACAAAATCAATGTGCAAAAATCACAAGCATTCTTATA
CGCCAATAATAGACAAACAGAGAGCCAAATCATGAGTGAACCTCATTACAAATTGCTAC
AAAGAGAATAAAATACCTAGGAATACAACCTTACAAGGGACACGTAGGAACCTTCAAGGA
GAAC TACAAACCACCTGATCAAGGAAATAAGAGAGGACACAAACAAATGGAAAAACATTCC
ATGCTCAGAGATAGTAAGAATCATGAAAATGCCATACTGCCCAAAGTAAATTATAGATT
AGTGCTACCCCATCAAGCTACCATTGACTTTCTTACAGAATTGGAAAAACAACCTTTA
AATTTTCATATGGAACCAAAAAAGAGCCACAGAGCCAAGACAATCTTAAGCAAAAAAGAA
CAAAGCTGGAGGTATCATGCTACCTGACTTAAAACCTATACTATAAGGCTACAGTAACCAA
AACTGTCATGGTACTGGTACCAAAACAGATATATAGACCAATGGAACAGAACAGAGACCTC
AGAAATTACACTGCAATCTACATCCATCTGATCTTTGACAAACCTGACAAAAACAAGCAA
TGGAAAAAGGATTCCTTATTTAATAAATGGTGTGGAAAAACTGGCTAGCCATATGCAGA
AAGCTGAAACTGGATCCCTTCCTTACACCTTATACAAAAGTTAACTCAAGATGAATTAAA
GACTTAAATATAAGACATAAAACCATAAAAACCCAGAAGAAAACCTAGGCAATACCATT
AGGATATGGACATGGGCAAAGACTTCATGACTAAAACACCAAAAGCAATGGCAACAAAAG
CCAAAATAGACAAGTGGGATCTGATTAAACTATAGAGCTTCTGCACAGCAAAAAAACT
GTCATCAGAGTGAACAAGCAACCTACAGAATGGGAGAAAATTTTGTCAATCTATCGATCT
GACAAAGGCTAATATCCAGAGATCTACGAAGAATTTAAACAAATTTACAAGAAAAAACA
ACCCCGTCAAAATATGGGCAAAGGATATGAGCAGACACTTCTCAAAAGAAGACATTTATG
CAGCCAACAAACATATGAAAAAACCTCATCATCATTTGGTCGTTAGAGAAATGCAAAACA
AAACCACAGTGACATACCATCTCATGCTAGTTAGAATGGTGATCACTAAAAAGTCAGGAA
ACAACAAATGCTGGAGAGGATGTGGAGAAATAGGAACACTTTTCCACTGTTGGTGGGAAT
GTAAATTAGTTTCAACATTGTGGAAGACAGTGTGGAGATTCCCTAAGGATCTAGAACCAG
AAATATCATTTTGACCCAGCAATCCCATTAAGTATATACCCAAAGGAATATAAATCAT
TCTATTATAAAGACACATGCACACATATGTTTATTGACAGCACTGATCACAATAGCAAAGA
CTTGGAAACCAACCCAAATGTCCATCAGTGATAGACTGGATAAAGAAAACATGGCACATAT
ACACCATGAAATACATATGCAGCCATAAAAAGGATGAGTTTATGTCCTTTTGCAGAGATATG
GATGAAGCTGGAAACCATCATCTCAGCAAACCTAACACAAGAACAGAAAACCAACACCA
CATGTTCTCACTTGTAAAGTGGGAGTTGAACAATGAGAAGACATGGACACAGGGAGGGGAA
CATCACACACCAGGTCCTGTTTGTGGGTGCGGGACTAGGGAAGGGATAGCATTAGGAGAA
ATACCTAATGTAGATGACGGGTTGATGGGTGCAGCAAGCCACCATGGCACATGTATACCT
ATGTAACAAACCTGCACATTCTGCACATGTACCCACAACTTAAAGTATTAAAAAATAA
CACACAACATGTTGCCCTGATGAAGGTCATTAGTGGCCATAAATAAGTAAATGTGTTTT
ATGTTTTTATATATTTGTTAACATATAATATCCTTTTACCATTTAAAACAAATCAGGTTCC
ACTAAAATCTTTGTATATTAATACCTGTGTATCAATACAGCATTCTTTAAATCAATAAGT
ATATCATTAATTTTAAATTCATAAGTTTAAACATAATTTCTTAAATTAGTAGTTAAATA
GAAGCCAACCCCTTCTCCCTGCAGTGGCCCTTCATTTAGTGAAATATTAGCTATTACATAG
ACATATACTTGGTAAATTCATCTTGTGTTTTCTAATATACATAGTCAGATTAATATATT
ATTTACTTTTATGTTCTTAGATCCCGGTTAGCCTTTATTTTTGATTTTGTCCCATTTTCCCT
TTTAGATTCTAAACTTGGTCATGGCACCATTAAACAATTCTATAGCATTTTACAGTTTTT
GAATAATTTGCACAGGCACTATTTTTTTTTTTTCTTTTTTACCCTCAGACAAATCTTTCACA
TGGTGGAAAAGGTATCATTTATGCCCACTTTTATACTGAGATTCTAAAGGAGGATAAGTACC
TTGTCCAGGGTCTTCCCTGACTTGGACCTGGGACCAGGACCTGGGATCAGGACATTTAA
GCTCCTAGCATATTTCTGACTTGAGGCCCTCTCTAACATGCCCTTCAATTTCCCTTTTATGTCT
CAAGGGTGTGTCTGGCTCCCCATGTGAACCGGCAGGGAGACCTGTGATGCTTTGCTTGAA
CTTTTGTCTTAGGTGAAAGTTAGATGCCCTGGAGTCCCCTGCACTCATGCATCACGGTCTG
CACATTCCCTTCATTTAGAATTTTGGCCATGCTGTTCCATAGACGGTCCAGTGAGGCAGGG
AATAAATCACTGCATTTGTTTAAATGTTCAATCAAGTTAGGGCACTCTGCTGATGCAGAAT
GGAAGATGGAGATCTGTTTGTAGAAAACTTCAAAGACTTGTGCTAGTACAAAGTTGGCAG
GGGTGGAGGAAGGAATACCCTAAGAAAGTTCTTTAGGGAGACAAAGTGCAGAAATTTT
GATATTGGTAAAGCTAGTCCAAAGGCCAGTTTGTAGATTGATTCTATTATCATCTCCTG
CAATTCTATTGCACTTACAATAGGTACCTTGGAAAGGGTGGGGTTTGGACTCCCATAGC
TTTGCCAAGAATTTCTCCAAGATGAATTAATTGCTATTTTCCAAGACTATCTGGCCTGTA

AAAGAGATTTGAGAAGCTAGGGGATGCAGGAGAGGGAAATTATTTCTAAGAAGCTGAGCAT
ATGATAAAATATTCCTTTGTTTAAAGAAGACTGTTATCAAGGCCAATAAATTTGTGATGACT
GGCACCTGTAAAATCAGAGCTTTGTCTGATTTGCTTTCTCATTGACGGCAAACAAAAGTG
TGTGCTTTGGGATAAGAGCAAGAGCCTGGGCAGTTTTCCTAAGTGGTCTTCTGATTTGCTC
AGGGATTTTCTCTGTGTTTATATTAAGCAACGTGAGCACGGTATATATGTGTTTTGCTG
ATAAGAAGAGAAAAATGAATTGGCAGACACCTTTTCCCAGACAAGACAGGAGAGCACTAT
TTGAACAAAGTGGAATTTGGACTGCCTTACTGGATGATCACAGCACTGATGTTCAAAGCT
TTCAGATCATGTAATAGTCTTAGGTTTTCAGGTACACAGCATTGAAAGAAGGAAGAAAGCAA
GGCTGATTTGAGGGCATGTAGAAAAATGAAAAGCCTTTATCTGAGAAAGCAAACCTGGCGG
TTATAGGTTATCTGGTCCCTTTTAAAGGGAAGGAACACTGAATTAATTATAGGAGCTGAA
GGCACTTGTTAATAGGTACCCTCACACAACACTTTCTTATTTTCTGAGCTATGATTCAC
AGCTGGAAGCACACAACCAGAAATAACAAATCCACTGGCGGGCAACCAGCATTTCTTAAC
ACCTATGGGTGCAAAATGGGGATCTTGACTCCTCTCCACTCTGGAAAACCAACAAAGCCA
GGGAAACTTGACGCTACTAAATGGAGTGTGACTGAGCCAATGGTGGGTTCATACCAC
CATACAAAATCAAAGATGCTCAGTTTGTCAAATTACCTCATCACAAAAGATATTTAACTA
CAGTTACTCACCTTGTGTTGCCAATAAACGCTCTGAATAAATCTTCACCATAAAGCTATTTAC
ACTAATAAAACAATACCAGGCAGAAAAGCTATCTGCTGAGTCTGGTTCCTGTTTATTGAG
AATATAAAAAAAGGCTGTAAAGGCTTGTAAACAGTTCTCAAATTAATGGCTGACTTAGGAA
CACAAGTACGTATTTTTCAGGACAAATGCATTATATAAACCCAAATCATTAAGAGTTTAAGA
TTCTTCCCTTTTTTTTTTTTTTTTTTTTTTTTTTGGAGATGGAGTTTCAGTCTTCTTGCCCAGGC
TAGAGTGCAATGGTGTGATCCCGGGTCACTGCAACCTCCACC'TCCCGGGTTCAGTGATT
CTCCTGCCTCAGCCTCCCAAGTAGCTGGGACTACAGGCACGTGCCACCACGCC'TGGCTAA
TTTTTGTATTTTATGATAGAGATGGGT'TTCCCCACGTGGCCAGGC'TGGTCTTGAAC'TCCT
GACCTCAGGTGATCTGCCTGCCTCAGCCTCCCAAAATGCTGGGATTACAGGCATGAGCCA
CTGCGCCCCGTCTCTTCCCTAACTTCTAAACCAGGCTGT'TTTCAGCACACACAGTTTCTCA
AGGAAAAAAAAAAGCTTCTCTTTTGTATCTCTTTCATGCTTATAGCCTTTATAAAAAATGT
ACACAGAGTCAATATTTTTAAGGGATGCTAGTGAATTATTTCTGAAACCTAAGTGACTACA
AGCAAAAATATCTTGAGAAAGGATAACATATTTTCCCTCCCTGAGTAATTACTCAACCT
GCAGGCAATATCTCACAGCAGTGGCTGGCATTTGTAACAGAAGGACTGATATCAAGTCCCAA
GACACAGTACTCAGTTAAAAAGACATAAATGACAAACAGCTCAACAGTGTATATTAAGA
AGTTAAGCTTGAAAGGTGACAAAAAGCTGGGTATAGTGGGAGTTTATAACATGCTCATGA
ATTTTGAAAATGCAATCATGATATCTGTGCATATTTACTTCAAATAGATGCGTCTCTGTGA
GACTCTAGGGTTACTATGAGGTGTACTCAGTTGCAGTTTAACTTTACAGAACTAAATAG
TTAAATGATTTTGACAGCACCTTAGAGGATTATTGACTACATGTTTACAGCCTACCAATTGC
AGAAAACATAATGGAAAGCCTGGGTGGGCACTACATTTTACAGAGCATGGCATTAGCATTGG
GTATCACTCATGACACAGATGGGCC'TTGTCTGCTTGGGGAGTACCTTGCCCCATGTGGCA
AGTTTGCCGCTTTGGCAGGAAGGCC'TGATGTGAAGCTAGATTGAGAAGGGAGAAGGTGTG
CAGTTTGTAACTTAAACAAGGAGTTCACCTAACTTGTAAAGTGAAGTATCAGGGAAGAAA
TGTAATCAGAACTGAGAAAGCCAGACCAGGCTCTCATCTAAT'TCCACCCACATCTGCTTT
GTACTTTATAGTCTTTCAGATGCC'TTCATTACCCAGTATCCCCAGGTGGTAAGAAGCACA
TGTGTTATCATTGCCATTGTCAAGATGAGTGAATTAAC'TTTTTTATAAGCAGTCTATAAA
CATTTACTGTTCTGGATCATATCTTTATTTCTTTTTCGATTTTACCTAGCATTTCAACCACC
AATTTGTTTTTATTCCTTACACAATTTTCAATTAAGATTTTGGGGGCAGGATAAAGTGTAAC
AACAGATAATGAATATGATGTAATTTTCAGGTTTGCCTGGGAACTCAAAATTTGTAGGTTAT
TATGGGATTAAGTGAGGAAACCTGAGGCCCTGGGAAGTTTAAAGTGGCTGGTCTCCTCAGT
TGCCCCCTCCATGTGGCAAGCTGGAAACCAAGACCCACATCTTTTCTAGTCTTGCAGGTTT
TCTGCTCTATTGCCCTCTCTTGGTAGGAAAACATCACAGACCATGAGGCTTCACTTAAAG
GTGGAGAAAAGGACAAAGAGGCAGAGAGACTCCACAAGTTCTAGCTATGAGGTTTCCAAAAA
AATAACAGAAAAGAGATTTTCTTGACTTTTATTTATGGTTAGGTATAATCATGACCCAAAA
ACTCCCTCCCTATTGCTAGAGAAGGAAAACTCCTTGCGCGAAATTTATTTTCTGTTTCTT
TGGTCTCAATTTGAAAATTTAGGTACTTTTTTTTTCAATAACAGACGTTTCAAACATGTAA
AAACAAAGTACTATTTCTTTTACCTCAAATCTGAAGGTCAACAGTGTATTACTCTAACCTC
ATATTTTCATGTATAAATACAGATGCTCGTTGACTTATGATGGGGCTATATCCTGATAAAC
CCATTGGAGGTTAAAAATATTTTAAGTTGAAAATGCATTAATACCCCCCATAAACCCAC
TGAAAAGTAAAAAAAAAAAAATCTAAATCTAACCATCATTGAGGATAATCTGTACCAAT
TTATTAATACATCTCCTAACTCTTAAACTGTGATAAAATGCAAAATGTTTAATACAAAATT
CTACCTTAGAACAAGAAGAGTCATTTTTTTTTTTCATTTTGTCTAGATGTCTAAGTGATTCT

TAGATGCTATAAATGTGCCAGAATCAGAGATAGGTATAGGCTTGTGCCATTCAACAAGGT
AGTCACGGCCTTGTGTGGTAATTTAAATTTCAATTAGTTAAACATAAATAAATAAATAA
TTTAGTTTCTATTTGTGCTACACACATTTCAAGTGCCCAACAGCCACATGTTGCTAGTGA
CTACCATATGGAACATTGCAAAATATAGGTTATTCCTATCACTACAGGAAGATCTATTAGA
CAGTGCAGGTGGTTAGGTCAAGCATCCTGAGAAAATTATGAGAGGAAGAACAGAGGAAAT
TAACATCTATCTTTATCTCTTTGATGCTTCCTATGTTTTTGGCTGTTGACTAAATGGATA
CAGCCAGGGCACCAAATCATGAAAAACAGTTGAGTAATAATTTAATAGGTCACATATACTT
TTAGGAAATATCCTCTTCCTTCATTATACACTATCAAGAGAAGAGAAGTGAATAATAGT
TTCTTCTAATTGTCTACACAATACGTTTTTCTGGAATCCTCCCTTTAACAAAAATCATA
CCCAAATTATCTTTTATATTTCTATGATGGGGTTTCAGGACACTGTACTCCCAAATGTTTTA
AGCTGAAGGAATTTTGAGAAAACAAAGAAAAGCAGAAAGATCACTCTGACCTTCCCTCACC
CTCCATCCTGAAGGAAGTCATAAAACCTAGGATTTTCTGACCTTCCCATGTAGCAAGTCA
TAAGACCCCTCATGCGAGAGGTGCCCCGTGTATACCCAGAAGAAAGAAGAAATTCCCCCCCCG
CCTTTTTGTGTTGAGATGTGGTCTTACTCTGTCCAGGCTAGAGTGCAGTTGCATGATC
ATGTTCTGCTGCAACCTTGAACCTCGGGCTCAAGCAATTCTCCTGCCCTCAGCCTCCCAA
GTAGCTCAGACCACAGACACATCCTCCACACTTGGCTACTTAAAAATAATTCCTTTTTTTT
TATTATTTATTTATTTTTTTTTTAGAGATGGGGGGTCTCGCTATGTTGACCCGGTTGAT
CTTGAACCTCATAGCCTCAAGGGATCATCCCACCTTGGCCTCTCAAAGTGTGAGATTACA
GGCATGAGCCACTGCTCCTGGCCTAAGAAATCCTTATCTCCAAAGACAAAGGTAGAACAAA
TAAGAATCTGAACAAACAGGCCCTTGTAAATTTTCCCCAGTTTATTACCATTAGATCATA
TCTGCCCTATCATATTTCTCCACAACATATCCACACTTTATCAAACCTTACTGTAAAAAATT
ATCAGGTTGAACCACTTTTTTGGGTCTTCCTTACCAAGGCCCTCTGTGTACGTAACCAT
ATTCAATAAATGAGTACACTTTTCCCTTTGTTATTTCTGTCTTTTGTATAGTGGCCTCAGC
CATGAACCTAGGAAGGGTGGAAAGAAAGGTATTTTTCTACTCTATATCTAGTATATTTCC
AAGAAGCATAGAATGATTGTTTAGAAAGAGGAAAAATACCTTCAACAGGGTACCTACAAAC
TTTTGAGAGCAAGAAATAATAAAGACAGTCACATTTTACTGCACAGTGAAAACCGCTCAA
AACCTTACAGGACAACATAATGACCTGTGAAAAAGCAATATTAGCTTCGTTAGAAGCT
TTCCAGTTTCCCAGATTAAATTCCTTAAGGTTGAGCACTGAAATATTTGTGGAGAATCA
CACAAAGCCTGTTATGTGACAAGGTCTCATTTACCCCTTAAGGGTGCTCATCTTTCACAGA
AACTCATTTTCACATCTCATCAGTTGCAACCATGAGCTGGGGAACTGGTTTCTCATTTCT
CAGAGGTAAGAATACAGACACAGAATTCAGAATAAAGGACTAGAATTTTTCCCTAATGAG
ACTAGGCTCAAGCAACCCCCACTTCTGGAAATGGAATAAGCCTTTTGTCTGTTTCCACAG
GGCACTTGACAGTGATAATTGTGACACATCTCAAAGGTATTTTCAAGGAGTCTCAGGGGCAT
ATGACAGGAGTGTTTGTTCAGGTAAGCAGTTACTGGCTGGTGATGGATGTTTATTTTTCT
CTTTCATCCAGCACTTGACAGAGTGATTTTATAGAGCTTTGCAGAGTTCTAGAAGTAAAA
ATATTAGGACACATGTCTTAAAGAGATGCTTTTAGATACAGTTTCAAAGGATGCCAATGTT
TCAAATCCACTCATGCGACTGAACAAAGAGATCAAGAGTTTCCCCCTTACACATTAACCT
GAGAACAGAAATTTGCAAGTAATGGTTATTGTGTAGAGAGATAAGAAAGGAACATAAGAGG
AGGAGGGTAGCCAGGCCCTTCAGTGTTCTTCAAAACTAACTGGCTGGGAGGCAAGGGTCTT
TGGGGGTCTATGGTTCACTCTGCTCTTCCCACAATAAGTAATTTTTTAAATCAAGCTAAA
AATTCTATCTGAGCATAGAGTCAAGATAAAAAATAAGCACTCCACAAATACATCAAAGTC
CTGACCTTGAATGTTCTTCTCACAGTTACTACTAGGTAGAGACCTTGTCACTTCCTAGA
TTATTTTAACTATAACCTGATTACTGCATTTCTGCATTTATCCTTGGGGTATGATTAAAGG
TTATAAAATTCAGGTTCTTAGAAGTGAAGGACAACATCCAATCTAGAGTTCATCAGTTCA
TACAAAAATAAAACACAATGAACATAGATGATAGCATTTCTCTAGATATGAGAACATTTTT
TTTCCCTTTGAAAACAGTGGGGTGGATCAAGCAATTTCTTATGACTTAAGAAAATATGTTCC
ATGTAGGGCTAAAAATAGTGTTTCCCTGTCTGAAGTAAGTATGGTCATGGTGGAACAATTT
CCTACATTTTCCAAGTTGAAAAATATCAATTATTACATACTCATTTTTTGCTTAATCCAGAA
GTTACCTCCTAACTTACTACGATTTTTGTGTTGTTTTTTCAGAAATAGAAATCAAAACCAAAA
CACCACCACCACCACAAAAGCCTCCAAAAAACAGTTTTTACAAAGCTGGAGATTTTGTTTA
GAGAGAACTACCTATTCCTTTGTTGTGGTGGACACTTTTTTAAAAATTAATTATTATACTTT
AAGTTGTGGGATACTTGTGCAGAACGTGCAGGTTTGTACGTAGGTATACACGTGCCATG
GTGGTTTGTGTCACCCCTTAAACCATCACCTACATTAGGTATTTCTCCTAATGCTATCCC
TCCCCCAACCCCCAACCCACCGACAGCCCCAGTGTGTGATGTTCCCTTCCCTGTGTCCC
TGTGTTCAACTCTCACTTATGAGTGAGAACATGTGGTGGTTGGTTTTCTGTTCTCTGTGTT
AGTTTGTCTGAGAATGATGGTTTCTAGCTTCATCCGTGTCTCTGCAAAGGACGTGAACCTCA
TCCTTTTTTAAAGGCTGCAAAGTATTCATGGTGTATATGTGCCACATTTTCTTTATCCAG

TCATCACTGATGGGCATTTGGGTTGGTTCCAAGTCTTTGCTATTGTGAATAGTGCTGCA
ATAAACATATGTGTGCATGTGCTTTATAGCAGAATGATCTATAATCATTGGTATATAC
CCAGTAATGGGATTCATATTTTAGTTTATATTTTAAACATATTTCTGCATGATGTTAACA
TCTTGCAAAATATATTTTCATATGCATTATTTTATTTGACCCCTCAGAGCAACTCTGGAAGG
GGTTATCTGATATATTAATTTTTCAGTCCATTTTAAATATGTGAAAACAGTCAAAACT
TTAGTGACTTGCATGTGTTTCCACAATAATAAAGTAATTAGAGCTGCTGCCATGTGCACG
GAAGAGCTCTAACTCCCTCTTCAGTCTACTCTCTCTCTCTCTCTATGTGTGTGTGTCTG
TGTATATATATATATATATATACACAGACACACACACACATATATATATATATATATA
TGTAATTTTTTTTTTGGAGATGGAGTTTCTTTTACCCAGGCTGGAGTGCAATGGCGCGATC
TCAGCTCACTGCAACCCTCCGCCCTCCCGGGTTCAAGTGATTCTCCCGCCTCAGCCTCCTGA
GTAGCTGGGATTACAGGTGCCATCAGCCTGGCTAATTTTTGTATTTTAGTAGAG
ACGGGGTTTTGCCATGTTGGCCACGCTGTCTTGAACCTCCTGACCTCAGGTGATCCACCC
ACCTCGGCCCTCCCAAAGTGCTAGGATTACAGGCGTGAGCCACTGCGCCCCGGCCTATCTTT
TATGCTCAATAAAGTGCTATATATTACTAGTGATAAGAAAAACCATAGACCCCTGGAACCA
GTGGATTGGAGTTGGAGTCCGGCTCTGTGATTTACTGACCAGGCCATGCTGGCCAACTT
ACTGATCCTCTTAGGGCTCAGTTTACTCACCTATAAAAAAAGAATAAAAAATAGTGACATT
TTTACAATATTGTTGATGGGGTGCTAAATGAGCTAATGATTACTTACAATAGTTTTTGTG
AAGCAATAAATGCCATTGTTACTATTATTAAGGTTATTGTGCTCTTTAAGTTTTTGTTC
TCCTATATTCTTTTACTTTTTGTCTATTTTTGCATAATCCAAGAGCTGATTCCCTGAGTAG
CACTTAATAATAGTTAAAAATAAATGAGCATTTCGGGTGAAACATACCTCATATTTAGA
AAATAAAAAGATCTTTGACAATTTATATTTTGTCTATCTTTATTGTGCCAAATTTATTA
TGATATAAATTGAATTAAGGTTTTGCTTATGAGATTGTGCCGTCATATCCTGTAAATGAAT
AACATCATATTTCTCTTTTTTTCTGTCTTTCTGCAAGTAGGTCAAGCTCTGAAATTACTG
TATCACATATTTGATTATATATTTCAACAATGTTGATGTTGATCCACATGGTGTATTGTT
CAAAATAGAAAAACAGTGCCCTTCGTCAGGATAGGATTAACCTGTCATCAGGACACTTGG
CTTTGGCAAACCTAGTTGTTGGGTAGAATTTCTGCTCCCTAATCAAACCCCTGGCTGGGTGCCCT
TGTGCAAGTGAAACAACCTGAACAACCTGTATGCAATGGCCCTGTCTTCTTGAATCCTATAGA
TTAAGCATTGCAACAAGAAATCTAAGAATGACATACCTCATGATACTTTTTCACGGTTTT
CCCTGAATTGCATGTGCAAGGACCTCCAGTTGACAGTTCCACAGCCACAATTTCTCTCCACA
GCGCTGCACGAGGAGGCAACGTGGAAAGAAGACCACATTTGGCCAACTTCAGCTCTCTCT
TATATTGACCGAGTAATTCCTGGGAGTGCAACTGTAACGCTTGGCATCATCATTGAGCCT
ATCCAGGTCAACTGTAAGCAAATACATGCACGTGTGTAAGCAAACACAACAGTAAGCACAA
TTGCTCAGCATGTGTTTTGGGGAATAGAGTGGGAAGATTCTGTGAGGACAACTTTAATCC
TGGGATTAAATCCATCCTCAGGCTCTCAATTACTGGGAACCTAAAGTAAAAGACCTAATT
TCTCTCTTGATCCCATCTACCCTTTGAAAAATAACAACAAAAACAAAAACAAAAACC
TTGGCTAAAAATTCATGCTTTGGTTCAAATTTCTTGCATCTTTTTTATGCAAAAAAAGTT
CAGAGGAAAGAAAAATGAAACATTTGGCAAATTTAAATAAATTGCCTTTATCTTTCAAAAAGA
CAAAATAAACTGCTTCTTTCATTCTAAATAAATCCTGACTCTAAGCCATCACTTAAATATA
ATTTAAATTATATCTAGGACACATTAGAGACAACCACGTATTTATATTTTACCCTGGCAGTG
AAATTTACACATAAATGTAATAAAGAAAAGGGTTTTAGTTTTATTTTTTAACCTCAAAGT
TAATCAACATGTTAGAGAAAATGATTTTTTTTGTGTGTGAATATGGTGCATATTTGTGCAC
TGGGTCTTAGATGGCAGTATAGCATAGTGGTTAAGTGCTTTGGAGCCGCAGTAAAGTTAC
AACTGCCTTCAATCACATCATGGCTATGTTTCCTTTTAGTTGGAAAGTTATTTAATGGCT
CTGAACCTTCTGCTTCCCTCATCTATAACATGTAATCATTTGAAGAATTGAATGTAACGTGC
CTGCACTCAATGCCAGCTATTCTTACTAATCTTGATTCTATCTGAATCTCCCCCTCTCACA
TTCTTTTTCTTTTAAAGTCAAATGGACAAAATTTAAAAATATACTACGTCTTTCTCCCTCT
TTATGTTTTCTTCTTTGGACATTATATAAATGATTATCAAGGGATATGGTCAGTGGGACT
TCTATGAACTAAAAGCACCACAATATTTTCAAAGCTAAGTCATAAATATTTACTTGAATT
CAATTCGCATTATTTGTGTTACATAAATTAGATTTGATTTCTCGTGTCTCCAAGTCCATCCA
ATTATCCATCCATTTGGCAGCCAAATCCTCTTATTGGTGCATACATACATGAGTATCTTC
TCACAAGAACACAGTTAGAAGCAAGTCTTTTGTCTGCACAGAACCCACCACCTTTCCC
AATGCACGCCCTTGTGTGCACCAGGCCACCACAGAAGGAATCCCATGAATGTTAGGCAGT
TATCACCATGTTCAATCTAAACTCTAGCCCTGGTAAATGTCTTAGGCTTAAACTGAACT
GCTTAAGGAGAAGGAAGAAAAAAGCCTTTGGGAGCAGAGGTCAAAAGTCAAGGACAGTG
TCAGTAGAATGCATCTAAGGAAAATTGCAGGAACAAGTGTGGACCATGAGTCCACTAACC
GCATCCCTGTTTTGTCTTTTTTATATCTACAACCTGTGCTTTGATTCTCAAGGCGAGGATTT

ATCCCCAATTGTCATACGCTGAGCCCAGGATACTGTGGGAACATAAATAAATGCCAAATAA
TCACTGTGCATAATTTATTGCTGTTTTTTTCTTCTTTGTAAAGACATGTCATAACTTTA
GCTATAATCAATCCAGATTTAAATTTGAATGAACCTCTGTCTTGGGAAAGGAACCATTTTAT
TGCTGCATAAGCCCTGAAAATAACTGCAAGCAAAGCAGAAAGGATTACATAAATGGATTA
AGAAGTGCAGCAATCATCCATTACAAGTGTACCTTGAGATAAATACTGATGCTGGCCTG
TGCATTCTTGGGCTTGTGAACAGGGCTGATGCAGAGGGCCAAATCTGCTGCTTGTGATAA
TGGGAAGATATTTGTCTAACACGGAGGACTAAAGAGGTACAATTAGCAGGAAGGGATCGT
GATGTGTGAGAAGGCAGAGAGGGACAGGACGCAAGCGGCAACACTGAGTCTCTGCTTTTCG
TTCAGCCCTCTGCTGAACATATGTCATAACCTTACAGATATGACTACATTTAGTTGTTCCC
CACCCATTTCAAGTGAGTATTATTTGCTAAGAGTTAACAGTAAATGGTAAAACCTGGAATT
GAAGCCTTTCCCCCTTTTGTCTCCATAGTCTCTGTCACTTTAAGCAGAATAGAGGGATGGT
CAGTAAGCCATTAGTTGAAGGAAGAAGACCAGTGTATGAGGGCTGTACTGGACTTTCTCT
GTCTGATGTTGAACCAGGGTTGGGTGGTGAATGGCCACATCCTTATCTTCAGAAGACACC
CAAGCCAAAGTACAGCATGCCCTTCCCTATAGGAATTCCAATAAACTCCAAAGTGCCCTCC
ACAAACCAGGAGAAGGCATGTAAGCCTCATCTATTTGAAACCAAACCTCCTCACATTGTA
TAACCTTTTGACTAGCATTTGGTTACTTTTCACTTTCTTACTCACCATGAGGAGATTACAAAT
TCTGTGAGTTTTATGCATCAATTCACATAATGTCACTAAGAAGTGTGACCCAGTGTGACTG
CTGTAGAATCCACCTGCCCTACATATCAGGCGATTGAAATCACCGAGGCACTCAATTTAG
AATTAGAAGTGAAGGTTGTTCTGACTGGATGCAAATAACTTCAAAGCGTGATTGCAGAC
TTTCTGCAGGGGATATTGAGTTTCCAGTCAAAGAAGACTGATAAGCCAGTGCAGCAGAGC
AGGGAGCCAGACAGAGGCTGAGCAGCAATTAAGGTTTCTGGTGTCTGGGTTAGAAGGAGA
ATTCTAGAGTGAGACTTCTGGGAGGGAGACAGGCCAAGTGGTGTCAACCGAGAGAGAGGG
GCTGCCCTTTCTGTTCCTGCATCAGTCTCCATAGCTGAACATTCAGAGCATCAAGGGTGT
TCCAAATTTAATTCAAGGGCCCCGCTAATTTCAACTAACGTCCCTTATTTTATCCCAGTCT
ACATCATGGAATAATCCCTCTTTTTCTGTCTATCTGAATTTTAGTTTTGCTTTATCAAAG
CTCTTTTGACATCAATTAAGTTTTTTTGGGCTCATAACAGGCACTTTCTGGAAAGGCTGGG
AAGGCTCCCCCTGCTTCAAAAACCTTCCTTTGGACATACGGTAAAGTGTGGGGTGTGCA
CAGTGCACAGGGGGCGACTTTTCTTCTGAGCCCTGCCCTCTAGGTGCAGCCTAATCACA
GAGGTGCTTTGAGATGTAATAAGAATGCTGGGATCTGAGCTCTAGAATGGGGATGTGAAT
GCACACCCCTTTTATAGTTTCTAATATTAGGTGTGGGAGGAAGGAGAGTCAACCTGTTCTT
TTTGATCCTGGCCATCTAGACTACTAAGTGTGTGTTTCATCATGAGTGCATGAAATACTC
ATAAATGCTATGAATTACATACAATCATTACTCTTACTTTTGCAGTTGAGGAACTGAGC
CTTTCAAAAGTTAAGAAAAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAA
GTAGAGCCAGAGTTTGAATCCAGGCTCTTTCATGCCCTTTTGTACATTATGAGCCAGTGT
AAAGATTTGAAGGAGGTTTCAAGAGAGCAGTTCACACAAGCGATGCTGAAGTCTTCCCACC
AGAGGACCCTTGTGTGCAATGACCTGGCTTCCCTAGGTGCACCCATAGGCACCTAACCT
GTCATTTTTCACATGTCATTAATACACATACCCAAAGCACGAGCAGCTGTGTATCCTCATC
CACCTATTTCAGTTCTGACTAATAAACCAGGCAGCTATTTCAGAGTCTACTTTTGTCTTTGG
TATTGTGATAAAACATTTTCGTCCCTTTTATCTGAACCGAGTGGACTTTTGGCCAATGCACAC
TCTTCCCTTTTGTCTCATTTCTCCTTGAACCCCTTCTTGGCTCATCTAGGAGCTGAATGG
ATTGATAGCAATGATTTGTCTCAGTGGGAACAAATGCCAGGATCCTAAAGATTCTAGTT
TCTGTAGGACAGATAAAACCAATATAATATTTACATACTTGGCAAGCACAACATGGGTG
TATTTTATACAAGTTACCTGTTCTGGTGGACAGAAGTCAAAATGTGCCCTTACTGGGTCAA
AATCAAGGTATGTAAAGGTAAGTCTGTTTTTGTGAATACAAAAATTCATTATGAAACAAA
ATAATCTCCTCACTTTGAACATGGGAAAGCACCTTTGTTCTCCACATGCACAATAATTTA
CTGCTTGTTTTGGTCAACAAGAGGATGGTTTCCCTTGAAGTCACTCTAAACATTAAGTTA
TCAGTTGGCTTTTCACTGTGCTGGCCATTTCATCAATCTTTATTTCTGATAGTAGAATCACAT
GCTTTTTTCTCTTGATCATCCACAGACTGTCAGAGAATCCAATTAAACTGCTGCATGTCC
TTGAAGACAGTCAGTAATCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCT
GCTCTGCTGCCAGGCTGGAGTGCAGTGGCATGATTTTCAGCTCACCATAACTTCCGCCTC
CCAGGTTTAAGCAATCTCCCGCTCAGCCTTCTGAGTAGCTGGGACTACAGGTGTGTGC
CACATGCCAGCTAATTTTGTATTTTCATTAGAGATAGAGTTTACCATGTTGGCACCA
GTAATCATTTTATTGTTGTACAAGGTCTAGCCTTTATAATGCTAAAGTTCTTTATAAAC
TCTTAGCAGGATGCAGCAGCAGCCTACATACTAGTGCATATTTACCACATGGTGATGGC
ATGTGGAGAATGAGCACTCAAAGTAGGGCCATGATGTTTTTGAAAACCATGCTCTTGTTC
TTCTGTTTTGCTTTCTCTGGCATCTCAGCTTGCTATATTATTTAATCTTCTAGAGCTCA

AGTCAAAAGGCATATTCACTCTACATCTCCTATGACTCCTTCTCTATGTACTCACCACAC
TTTTTCTGCCCTCTATTATAGCATTTACTTTCATAGACCTTGTTTTGTTTTCTTTGCAGAT
AGTCCAACCTTACAATGGTTCAACATGAGTTTTTTTTTTTTTACTTTTTTGATGGTGCTTTC
AGCTGTGTATGTTAATGGTGAGCACCCATAAAACCATTCTGTTTTTCACTTTCAGTAAAG
TATTCAATAAATTATATGAGCTATTAAACCTCTATTATAAAATAGGCTTTGTGGTAGATA
ATACTGACCAACTATAGGCTGATATATGCGTTCGAACATGTTTAAGGTAGGCTAGGCTT
AGCTACGAAGTTCAGTAGGCTATGTGTATTGAATGTGGTTTGACTTAACTATATTTTCCA
ATTACAATGTGTTTATTGGGATGTAAACCCATCAAAAGTTAAGAAGCATCCATATTCAGG
TGCTTCTCTTCTATTGAACATAAAAAAGTTGTTGGAGGTAGAGAGCTAATCATCTTTTTTAT
CCCTTCTCTTCTAGTACTTTGTCCCTAATGTAAGGACCAAATGCAGCTCATTCAAGCTCA
CTTCTAAAAACCATTTTGACTTCAACGATTAGGAGCAAGGTGCTGCTGAAGGAAGCACAACA
TCGCTCTTTGTGCCAGATTCCCTTTGCAAGAAATAGACACTCAATAATTACTACCTGAATG
AATCAGATAAAACCATGGATTTTTTTCAGTTTAAATTTTTTATCACAAAGGTGAAACAATTCC
AACTATCTTTTCAGGAATGCATAGAGTATTATTAATACTTTATATGTTGAATGTTTGGATC
TTATCTCAAGACTAGTCTAGGATGTGGTGTAGTGCGAAAGTGTTAGGTTAGAATTAAGAA
ACTAGGATTTAGAACCATCTCTGCCAAGGATGAACCAAGATGCATGAGATGACTGGCACC
AAGATCTGTGAAATATAGGAGTGGCACACATGGTAGAGCATGGTCTTGAGAAGACTGGTT
CTCAGATGCAACATCAAGGTGCTAAGGAACATTGCCTTTTGTCAAATGGGAGACAGTGCC
ATAATCTGTTATGAAAAGTGCTAAACATTTCCCTTTAATGTTGCAGCACCAGGTTTATGA
TGCTTTGGGGTGGGGTGGGAGGTGAGGGGACTATAGGAATAATTGTATTATTTTTGTAA
ACAACCAGGGGCTCTCAGCCTTTCTCAAGGTTTCATAAGTTCACCAGGAGTCTTCATCCTT
ATGAATATTACAACCTCACTGTGATTTTTCAGAATCCCTCTTCTATAAATCAGCACATAAT
TATGAAAACCTGTTTTACATTTCAATCCCAATGCAGAAGTGCAAATAAATCTGGAAAGGA
CAATTATTTTATAAGTTTTAATGAGGGACTATCAGGATACTTTAACTTAAAAATTATGAAA
GACACTGAATTTGTGACTCCACATGTGGGTTTAACATCTAAAGAATAAAAAACATTTACC
ACTTGTTTTTACACAAATTAACCTAAATCAGCAAAAAGATTCTTAATCAGACAATTCCT
GATTTTCAAGGTTTAGAAGCATTTGTGAAGCAACGAGTGAATGCAAACCTTACTGAGCACT
ACTATTATCCAGCATTTGTGAGATGCTTTTACAAAATCAAATTTCAATTTAATCTCAC
AGCAAAACCTCATCTTAGATATTACAATTCCCATTTGGATGGATGTAGAACTGAGTTGCA
GAGGACTTAAAGTGACTTGCCATAAGCCACTGGACGTAAGTAGATATTCAGCACATATGTA
CTGGAAAAATCAATGGATGACTGAATGAATATCTGGAAGGCACGTAATTAGCCATGAAAGC
AGTAACACCATCATAAAGCCATTCTCTGAACCCCTGGGAATTCATGACCTGGGGTGATGTA
TAAAGCATATCTATGAAATGAAAAATTTTTTAAAAACAAGTTAGGAGATGAAGGTCTTA
AAATTTCTTGTCTCATTTACTAGACTATGAATCCCTGAGCTTTAAACACCATTGAGTTG
CTCAGCATGAGCTTTGCAGCCAACAAGGCCAAGTTCATGTCATGATTCCTATTTTCT
AGCTCTCACAGAACTTTCTGAATTTTTTTCTTTTACTATGCAAAATGGGAATCACAGTA
GCTCCTGCCAAGGAACCTGTAAAGATTAAATGAGTTTTGAGTGTGTTGAAGCACAGGTCTA
AATCCTACCTCTCAGTAGGTATGCCCACATTATTACTGAAGTGAGTAACACAGATCAAAG
AAGGAAGTTTTAAATCAGAAGCACCTAAAACTAGAAGGAGCTGAGATTCGTAAATGGTGTA
TTACTAAGGAATAGAAGGCCATGCCACCTTGAACATAAATAAAGCCAAATGATCAGG
TGTCTTCAGTTTGATTACATCAGACGTAACACTATCCTTTGCAAGTGTATTAGTCCATTC
TCATACTGAGATAAAGAAACACCCAAGACTGGGTAGTTTATAAAGAAAAGAGGTTTAATG
GCCTCACAGTTATGCATTGCCTGGGAGGCCAAGGAACTTACAATCATGGCAGAAGGCCG
AAGGAGAAGCAAAGGCACGTCTTACATGGTGGCAGGAGGGAGAGCATGTGTGCAAGTGTA
GGGGAACATGCCCTTTATAAAATCATCAGATCTTGTGCCACTCACTCACTATCACAAAGAA
AGCATGGGGAAAAACCATCCCCATGATTCAATTTATCTCCATCTTGTTCCTCCCTTGACATG
TGGGGATTATGGGGATTATGGGGATTGCAATTTCAAGATGAGATTTGGGTGGGGACACAAT
GCATAACTATATTAGCAAGTAAAGACACTCAGTGAGTTGGATCTCTCAGCACCAGCAGGG
CCTACAAGCATATATGCTCTAGGAGCAGTGTAAGTGTCTCCTTAAGTCTAGTGGGGCATAA
AGGAAAAAATCCCATAATAATTTTCCAATGCTTCACAGAAAAAATTAGCACAGCAAAC
ACAAGGAACACACATTTCTCTTTAACAAGAGTAATTGCAGTGGAATGCACATTTGTTC
ATCCGACGCTAAAAGTTACCTATGGCTTTCCACTGTCAACTGGATTTTTCTTATGATTT
GCATTTGAATGACATGCCAGATGAGGGGAATAACTTTGATAATGAGGGTGGGGTTAGGA
TATCCACAAAGACGGACAACCTGCGTCTAGGATGAAAGCAGAGGTGGCACAGGCACCAGGA
GGAAAAACAACCTGAAAGTTGTCCCACTGCTGAGATTTTCTTAAATATTTTATGTGTGTG
CCCTCATAGACACACAAATATGATAAAACAATATGGTTTTTATGAATGCTTGTGGC
AAACAGAGTAAGTGAGGCAGCTAGATACTTACAAATCATATGAGTCATAAACAGTGGCAA

AAGTCTCTAAAAGAAAAGCTTAGCAGAAAAAACATCCAATAAGCAAAATAGTGTGAGAAA
ATTTCTGGATAAAATAGTATCAGAAAAGTTTAGTACTTGGAGATAATTTTGAAAACTTTTA
ATGAGTACACTGATTATACAGATAATTTAAATAAGACAATATTTGCCAAATACATCTGTG
AGGCTCTCCAGATTACTGATGGTTATCTTAGAGCCTTATAGGGAAGACAGCAGAGCAATT
AATAGAAATATCTTGGTTCTGTGCAGAGTTTTGCAAGCAATTCAAATAATAACAGTAGCT
ATCATTTATTGAGGGTGTAGATACTCTTTTCATTACCTAATCCTAACACAAATTTGCAAA
GTGCTTATAATTAGAGCCATTTTACAAAAGAGAAGAAAAATAGAGAATCAGGGGTCTGTAAG
TGACTTCTCCAAGGCCACTGCTACTGATTTTAGGATTTGAGTTAGAATTTTATTACAAGT
TAGTTTGACTCTCAAGTCCATGCTCTTTCCATTGCAACGTCCTTCTTTCTTTTGCTCTAT
TTCTATTAAATTTATGCCAAACAATTTTAAATTTGATAAAATAAAACTTTCACTTGGTAAA
GGTACCAAAATATACCACATGGTTTCAGGAAACTCAATGAAGCTAACCATCTTTCAATAATA
GAAACTATTATTAAACAATAATGTAATATTAATAAGCAACACAAGTTATTATTAAATGTCTA
TTATCTACTGATGTCACCAGTACCCTCTTAATTTACAGAGATGTAGTTACAGATATCTGA
AGACTGACTGATCTGACTCATCACTGGTGTGCGGCAACAGCTTTTGGCAAATCTTAACC
CAAGTATCAAATAGGCAGACAGAGAAAATTGCAAGCACTCAGTTTCTAAAATATGTTTCAT
ATGTTAATGCTCTCTGAATAATTTCCCTACATTTTGAAATCATTTTTTGAAAAATCAAACTT
GTGTCCTCCTGTTTAGCATGCAGTGGCATGACAAAGAAACAGCAATAAATGATAAAATTT
TTTTAAAGAACCTATTCTGACTTAAGAGAACTCAGAACGAATGAAAACATACTGATATAA
AACATTTATTTCATTTATTTCTCAGTTTCTTATGCTAGTTATTTACCTGTAAATAATTTG
CAAATTAGAGTCAAATGTTTTAGATTTTTAGAGGAAAATGTGATGGAGAAAATAATAGAAT
TGGTATTAGATCCTTGGAAATGGGTTGGTAACTGTTCCACAGTTGTAACATCTAACCAT
TAGAGTCTGTAAAAATCACATATTTCAAACGTCATCATTTGGAACTAATTTAGTATCAAG
ATGTTTACTGCACTCAATATTTAAATACTGTTTTTTTTGTTTGTGTTTTGTTTTTTTT
TTTTTAAAGCAGGGTCTTCACTCTGTTGACCAGGCTGGAGTGCAGTGGTGCAGTCACAGC
CCATGGTAGCCTTGAACCTACCCGGGCTCAAGTGATCCTCCACCTCAGCCTCCTGAGTAG
CTGGAACACAGGTATATGCTTCACGCGTGGCTAACTTTTGTATTTTTTTGTAGAGACAGG
TTCTCACCATTGTGCCCAGGCTGGTCTCTCACTCCTGGGCTCAAGCGATCTGCCCTACCTC
GGCTCCCAAAGTGTTGGGATCACAGCAGTGAGCCACTGTGTGAGTCTAAAACACTTTTT
TAAAAGAGGAGTGGATTTTGAATTTTAGCATGTGTATCTAAAAATGATTACTTTTTTGGAGA
ACAATATATTTTAAATTATTAATTTAAAACTATTAATTTGGAACACCCCAATAATTTTGT
CATATTTTAAATCAAAACACAAAGCTTTGAAAACAGGTTTCCCTCCTTGCCATTATGTCCCTG
GATTTTTCTTTGGTGAACACACTATCATTTCTAGAAAGTCAAGTTCTCCTGGAATAAGAAA
AAGAACAGATCTTACTTATATTTGTTTATCTCCATAAATCACCTCTCCGTTAATGTCCAGT
CAGGGCTGATCATTTCTTAATTTAGAAATGTTGAATTTTATGCTATGAACTTGAATAAAT
ATACATTGTCTTAAATTCATAGGTATATGTTTTTCTGTTTTGTTTTGTTTTTTTTAATT
TTATGATTATTATACTTTAAGTTTTAGAGTACATATGCACAATGTGCAGGTTTGTACAT
ATGTATACATGTGCCATGTTGGTGTGCTGCACCCATTAACCTCGTCATTTAACATTAGGTA
TATCTCCTAATGCTATCCCTCCCCCTCCCCCACCACCAACAGTCCCTCAGTGTGTGAT
GTTCCCTTCCCTGTGTCCATGTGTTCTCATTGTTCAATTTCCACCTATGAGTGAGAACAT
GCGGTGTTTTGGTTTTTTGTCTTGTGATAGTTTGCTGAGAATGATGGTTTTCCAGCTTCAT
CCATGTCCCTACAAAGGACACGAACTCATCATTTTTTATGGCTGCATAGTATCCATGGT
GTATATGTGCCACATTTTCTTAATCCAGTCTATCGTTGTTGGACATTTAGGTTGGTTCCA
AGTCTTTGCTATTGTGAATAGTGCTGCTATAAACATACATGTGCTTGTGTCTTTATAGCA
GCATGATTATAATCCTTTGGGTATATACCCAGTAATGGGATGGCTGGGTCAAATGGTAT
TTCTAGTCTAGATCCCTGAGGAATCACCACTGACTTCCACAATGGTTGAACTAGTTT
ACAGTCCCAACACAGTGTAAGAGTGTTCCTATTTCTCCACATTTCTCTCCAGCACCTGTT
GTTTCTGACTTTTTTAATGATTGCCATTCTAACTGGTGTGAGATGGTATCTCATTTGTTGTT
TTTTGATTTGCATTTCTCTGATGGCCAGTGATGATGAGTATTTTTTTCATGTGTTTTTTGGC
TGCATAAATGCCCTTCTTTTGAGAAAGTGCTGTTTCATATCCTTCACCCACTTTTTGATGGG
GTTCTTTGTTTTTTTTCTTGTAATTTGTTTTGAGTTTCATTGTAGATTCTGGATATTAGCCC
TTTGTCAAATGAGTAGGTTGCAAAAAATTTCTCCCATTTCTGTAAGTTGCCGTGTTCACTCT
GATGGTAGTTTCTTTTGCTGTGCAGAAGCTTTTAGTTTAAATTAGATCCCATTTGTCAAT
TTTGGCTTTTGTGCCATTGCTTTTGGTGTTTTAGACATGAAGTCTTTGCCATGCCATAT
GTCCTGAATGGTATTGCCCTGGGTTTTCTTCTAGGGATTTTATGGTTTTAGGTCTAACATT
TAAGTCTTTAATCCATCTGAATTAATTTTTGTATAAGGTGTAAGGAAGGGATCCAGTTT
CAGCTTTCTACATAGGGCTAGCCAGTTTTCTCAGCACCATTTATTAAATAGGGAATCCTT
TCCCCATTGCTTGTTTTTCTCAGGTTTGTCAAAGATCAGATAGTTGTAGATATGCGGCAT

TATTTCTGAGGGCTCTGTTCTGTTCCATTGGTTGATATCTCTGTTTTGGTACCAGTACCA
TGTTGTTTTGGTTACTGTAGCCTTGTAGTGTAGTTTGAAGTCAGGTAGCATGATGCCTCC
AGCTTTGTTCTTTTGGCTTAGGATTGACTTGGCGATGTGGGCTCTTTTTTGGTTCCACAT
GAACTTTAAAGTAGTTTTTTCCAATTCTGTGAAGAAAGTAA